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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,879	03/26/2004	David W. Gillespie	SYN-088COB	9757

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SIERRA PATENT GROUP, LTD.
P O BOX 6149
STATELINE, NV 89449

EXAMINER	
SHANKAR, VIJAY	

ART UNIT	PAPER NUMBER
2673	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,879	GILLESPIE ET AL.	
	Examiner	Art Unit	
	VIJAY SHANKAR	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tannenbaum et al (5,252,951) in view of Dunthorn (4,914,624) and Mellitz et al (5,256,975).

Regarding Claim 1, Tannenbaum et al teaches a method of processing a user input received on a capacitive touch sensor pad including a matrix of X and Y conductors, the method comprising the steps of (Figs.1-3; Col. 1, line 57- col.2, line 26; Col.5, line 52-65; col.6, line 48- col.7, line 23); developing capacitance in one of an X direction and a Y direction from the matrix of X and Y conductors, the capacitance identifying a presence of user input objects on the capacitive touch sensor pad (Figs.1-3; ; Col. 1, line 57- col.2, line 26; col.7, line 43- col.8, line 54); determining an occurrence of a single gesture resulting from the user input objects through an examination of the capacitance , indicating the occurrence of the single gesture resulting from the user input objects. However, Tannenbaum et al does not teach a method of processing a user input received on a capacitive touch sensor pad including developing capacitance profiles in one of an X direction and a Y direction from the matrix of X and Y conductors, the capacitance profiles identifying a presence of at

least two user input objects on the capacitive touch sensor pad; determining an occurrence of a single gesture resulting from the at least two user input objects through an examination of the capacitance profiles, indicating the occurrence of the single gesture resulting from the at least two user input objects.

Mellitz et al teaches a method of processing a user input received on a capacitive touch sensor pad including developing capacitance profiles (fig.4; Col.3, lines 22-31) in one of an X direction and a Y direction from the matrix of X and Y conductors, the capacitance profiles identifying a presence of user input objects on the capacitive touch sensor pad; determining an occurrence of a single gesture resulting from the user input objects through an examination of the capacitance profiles, indicating the occurrence of the single gesture resulting from the user input objects (see Figures 1-6; Column 3, line 6-67; Column 4, lines 4-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Mellitz et al into Tannenbaum et al for providing the capacitance profiles that allow the user to detect any change in capacitive effects.

Dunthorn teaches a method of processing a user input received on a capacitive touch sensor pad including the capacitance identifying a presence of at least two user input objects (fig.1) on the capacitive touch sensor pad; determining an occurrence of a single gesture resulting from the at least two user input objects through an examination of the capacitance , indicating the occurrence of the single gesture

resulting from the at least two user input objects (See Figs.1-2; summary; Col.4, line 6-67; Col.5, line 55- Col.6, line 55; Col.8, lines 5-60) .

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Dunthorn into Tannenbaum et al for providing the user to activate the input device functions by detecting the change in capacitive effects.

Regarding Claim 2, Tannenbaum et al teaches the method wherein the signal is a simulated mouse button click (Fig.8; Col.16, line 38- col.17, line 22).

Regarding Claim 3, Mellitz et al teaches the method wherein developing capacitance profiles comprises developing capacitance profiles in both the X and Y directions from the matrix of X and Y conductors (Col. 1, line 57- col.2, line 26; Flg.3,6; col.8, lines 35-68).

Regarding Claims 4, and 10, Tannenbaum et al teaches the capacitive sensor and the input device comprising: a matrix of X and Y conductors (Col. 1, line 57- col.2, line 26) ; sensing circuitry coupled to each of the X and Y conductors (Col. 1, line 54- col.2, line 26) and configured to generate outputs based on the capacitance of the X and Y conductors (Figs.1-3; Col. 1, line 57- col.2, line 26; Col.5, line 52-65; col.6, line 48- col.7, line 23); and an arithmetic unit (Fig.3; COl.8, lines 5-65; col.9, lines 26-45) coupled to the sensing circuitry and configured to develop a first

capacitance in an X direction in response to the outputs of the sensing circuitry (Figs.1-3; Col. 1, line 57- col.2, line 26; Col.5, line 52-65; col.6, line 48- col.7, line 23), and to determine an occurrence of a single gesture resulting from the proximity of input objects to the matrix of X and Y conductors through an examination of the first capacitance . However, Tannenbaum et al does not teach the input device comprising an arithmetic unit coupled to the sensing circuitry and configured to develop a first capacitance profile in an X direction in response to the outputs of the sensing circuitry, and to determine an occurrence of a single gesture resulting from the proximity of at least two input objects to the matrix of X and Y conductors through an examination of the first capacitance profile.

Mellitz et al teaches the input device comprising an arithmetic unit coupled to the sensing circuitry and configured to develop a first capacitance profile (fig.4; Col.3, lines 22-31) in an X direction in response to the outputs of the sensing circuitry, and to determine an occurrence of a single gesture resulting from the proximity of input objects to the matrix of X and Y conductors through an examination of the first capacitance profile. (see Figures 1-6; Column 3, line 6-67; Column 4, lines 4-67).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Mellitz et al into Tannenbaum et al for providing the capacitance profiles that allow the user to detect any change in capacitive effects.

Dunthorn teaches the input device comprising an arithmetic unit coupled to the sensing circuitry and configured to develop a first capacitance in an X direction in response to the outputs of the sensing circuitry, and to determine an occurrence of a single gesture resulting from the proximity of at least two input objects (fig.1) to the matrix of X and Y conductors through an examination of the first capacitance (See Figs.1-2; summary; Col.4, line 6-67; Col.5, line 55- Col.6, line 55; Col.8, lines 5-60) .

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Dunthorn into Tannenbaum et al for providing the user to activate the input device functions by detecting the change in capacitive effects.

Regarding Claim 5, Tannenbaum et al teaches the capacitive sensor wherein the sensing circuitry is configured to drive the X conductors simultaneously, and to drive the Y conductors simultaneously, wherein the X conductors are driven separately from the Y conductors (Col. 1, line 57- col.2, line 26).

Regarding Claim 6, Mellitz et al teaches the capacitive sensor wherein the arithmetic unit is configured to develop a second capacitance profile in a Y direction in response to the outputs of the sensing circuitry (see Figures 1-6; Column 3, line 6-67; Column 4, lines 4-67).

Regarding Claim 7, Dunthorn teaches the capacitive sensor wherein the arithmetic unit is configured to differentiate between an application of a single object and an application of multiple objects to the capacitive sensor. (See Figs.1-2; summary; Col.4, line 6-67; Col.5, line 55- Col.6, line 55; Col.8, lines 5-60)

Regarding Claims 8 and 9, Dunthorn teaches the method wherein the at least two input objects are fingers (fig.1).

Response to Arguments

3. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

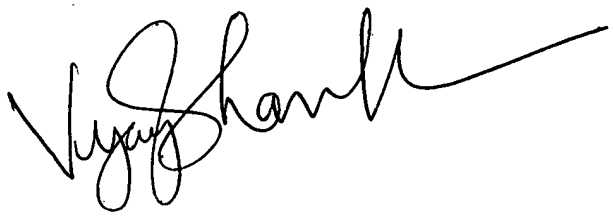
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIJAY SHANKAR whose telephone number is (571) 272-7682. The examiner can normally be reached on M-F 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BIPIN SHALWALA can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VIJAY SHANKAR
Primary Examiner
Art Unit 2673

VS